

### REMARKS

Applicants acknowledge that the examiner indicated allowance of claims 1-7, 26-29, 33-35, 37, 40, 41, 43, 45, and 57-60. Applicants contend that the other claims are also allowable.

The examiner objected to claim 56 because of informalities and suggested that "programming agent" should be changed to "processing agent."

Applicants contend that claim 56 and in particular the use of programming engines is supported by the specification. The term "programming engines" for example can be found on page 3, lines 13 to 19 and page 9, lines 1 to 14 of Applicants' specification.

The examiner rejected claims 13, 16-19, 44, 49, 50, 52, 53, 55 and 56 under 35 U.S.C. 103(a) as being unpatentable over Singhal et al. [5,978,874] (hereinafter "Singhal"), in further view of Misra et al. [US 6,654,836 B1] (hereinafter "Misra").

#### Claim 13

Singhal and Misra do not disclose and would not have suggested a push bus to push data from the memory resources to the processing agent, the push bus only permitting data to be sent from the memory resources, and a pull bus to receive data from the processing agent and to transfer the data to the memory resources, the pull bus only permitting data to be sent from the processing agent, as recited in amended claim 13.

Singhal discloses a computer system having plug-in circuit boards 50-N that each includes UPA CPU devices and on-board RAM (col. 6, lines 7-11). The CPU on each board can initiate read-type transactions to request transfer of data through a Data Bus from another board. Arbitration units 186 are used to arbitrate the use of the Data Bus by multiple circuit boards. In Singhal, the transfer of data on the Data Bus is not unidirectional. Data can be transferred from, e.g., circuit board 50-1 to circuit board 50-2, or from circuit board 50-2 to circuit board 50-1.

Misra discloses a processor local bus that includes a read data bus and a write data bus. Applicant contends that the combination of Singhal and Misra would not have suggested, because while in Misra's system, data are transferred unidirectionally on the read and write buses located between an arbiter 220 and PLB slaves 244, such unidirectional read data and write data buses would not work in Singhal's computer system. In Singhal's computer system, each of the circuit boards can request data from another board, so the read and write data buses would have to permit data to travel in two directions.

Applicants note that, if the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Fatti*, 270 F.2d 810 (CCPA 1959). See MPEP 2143.01, section VI. Because applying Misra's unidirectional read and write data buses to Singhal's computer system would change the principle of operation of Singhal, Singhal and Misra are not sufficient to under claim 13 obvious.

Claims 16-21 are allowable at least for the reasons discussed in claim 1. Claims 49-54 are allowable for analogous reasons given for claims 13 and 16-21.

#### Claim 55

Singhal does not disclose and would not have suggested a data processor that includes both a push bus arbiter and a pull bus arbiter, as recited in claim 55. Singhal does not disclose or suggest separate read and write buses, let alone a data processor that has separate push bus and pull bus arbiters.

What is missing in Singhal is also not disclosed or suggested in Misra. Misra discloses an arbiter 120 that is external to a processor core 110. Even though Misra discloses separate read data bus and write data bus, Misra does not disclose using separate push bus arbiter and pull bus arbiter, let alone having both push bus arbiter and pull bus arbiter within one data processor.

Claim 56 is allowable for analogous reasons given for claim 55.

All of the dependent claims are patentable for at least the reasons for which the claims on which they depend are patentable.

Canceled claims, if any, have been canceled without prejudice or disclaimer.

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Filed : January 25, 2002  
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Attorney Docket: 10559-618001 / P12857

Any circumstance in which the applicant has addressed certain comments of the examiner does not mean that the applicant concedes other comments of the examiner. Any circumstance in which the applicant has made arguments for the patentability of some claims does not mean that there are not other good reasons for patentability of those claims and other claims. Any circumstance in which the applicant has amended or canceled a claim does not mean that the applicant concedes any of the examiner's positions with respect to that claim or other claims.

No fee is believed to be due. Please apply any other charges or credits to deposit account 06-1050.

Respectfully submitted,

Date: 8/29/2006

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